



AN ISO 9001 : 2008 COMPANY & NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005

4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T-4358

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2017-06-01-02 Date: 03-06-2017
 Customer : Assistant Executive Engineer, Yelahanka Sub-Division, BBMP, Bangalore.
 Address : Yelahanka Sub-Division, BBMP, Bangalore.
 Project Name : Contraction of drain at Down Bazaar road near Nagareshwara temple and Surrounding area in Ward No.1 of Yelahanka Sub Division.
 Agency : Sri.Sambashiva Reddy.C, No.14, 6th C cross, 2nd main, Gopalappa extension, Marorayan Palya, Bangalore.
 Customer's Reference : EE(YNK.D)E-PMT-09/W.O/56/2017-18
 Source of Sample : Sample supplied by Agency
 Sample Condition : Satisfactory
 Date of Receipt : 01-06-17
 Sample ID No : 2017-06-01-02/01
 Sample Type : Ultratech 53grade
 Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
 IS 4031 (Part 1,2 3,4,5, 6,11):1988
 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
 IS 4031 Part 3, Determination of Soundness, Clause 5, Clause 6
 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
 IS 4031 Part 11, DETERMINATION OF DENSITY , Clause 6
 Date of test : 02-06-2017 to 03-06-2017

SL.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.95	—
2	Fineness by Air permeability method (m ² /kg, Min)	275.5	225m ² /kg, Min
3	Density (gm/cc)	3.21	—
4	Standard Consistency (%)	28.0%	—
5	Initial Setting time	155 minutes	Not specified
6	Final Setting time	280 minutes	Not less than 30 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 600 minutes
			Not more than 10 mm

Note:

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Prepared by
 Harshitha



FOR CIVIL Pro.

P. Karthik
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****End of Report****

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL
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**TEST REPORT ON COARSE AGGREGATES**

Lab ID : CP-2017-06-01-02 Date: 05-06-2017
Customer : Assistant Executive Engineer, Yelahanka Sub-Division,
BBMP, Bangalore.
Address : Yelahanka Sub-Division, BBMP, Bangalore.
Project Name : Contraction of drain at Down Bazaar road near Nagareshwara temple
and Surrounding area in Ward No.1 of Yelahanka Sub Division.
Agency : Sri.Sambashiva Reddy.C, No.14, 6th C cross, 2nd main, Gopalappa
extension, Marorayan Palya, Bangalore.
Customer's Reference : EE(YNK.D)E-PMT-09/W.O/56/2017-18
Source of Sample : Sample supplied by Agency
Sample condition : Satisfactory
Date of Receipt : 01-06-17
Sample ID No : 2017-06-01-02/01(a)
Sample Type : 40mm down size coarse aggregate
Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties
Date of test : 01-06-2017 to 05-06-2017

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken		:	15000	grams		
Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	758	758	5.1	94.9	90-100
3	20 mm	9459	10217	68.1	31.9	30-70
4	10 mm	2573	12790	85.3	14.7	10-35
5	4.75 mm	1977	14767	98.4	1.6	0-5
6	Pan	233	15000	100.0	0	---





TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2017-06-01-02
Sample ID No : 2017-06-01-02/01(a)

Date: 05-06-2017

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	10.5	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	13.7	
3	Specific Gravity	2.62	—
4	Bulk Density(Loose) (Kg/l)	1.49	—
5	Bulk Density(Compacted) (Kg/l)	1.54	—
6	Water Absorption(%)	0.21	—

Note:

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Prepared by
Harshitha



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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2017-06-01-02 Date: 05-06-2017
Customer : Assistant Executive Engineer, Yelahanka Sub-Division,
BBMP, Bangalore.
Address : Yelahanka Sub-Division, BBMP, Bangalore.
Project Name : Contraction of drain at Down Bazaar road near Nagareshwara temple
and Surrounding area in Ward No.1 of Yelahanka Sub Division.
Agency : Sri.Sambashiva Reddy.C, No.14, 6th C cross, 2nd main, Gopalappa
extension, Marorayan Palya, Bangalore.
Customer Reference : EE(YNK.D)E-PMT-09/W.O/56/2017-18
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 01-06-17
Sample ID No : 2017-06-01-02/02(b)
Sample Type/ Size : 20mm down size coarse aggregate
Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties
Date of test : 01-06-2017 to 05-06-2017

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	243	243	4.86	95.14	90-100
3	10 mm	2678	2921	58.42	41.58	25-55
4	4.75 mm	1973	4894	97.88	2.12	0-10
5	Pan	106	5000	100	0	-



**TEST REPORT ON COARSE AGGREGATES**

Lab ID : CP-2017-06-01-02
Sample ID No : 2017-06-01-02/02(b)

Date: 05-06-2017

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	9.7	
3	Specific Gravity	2.63	—
4	Bulk Density(Loose) (Kg/l)	1.53	—
5	Bulk Density(Compacted) (Kg/l)	1.6	—
6	Water Absorption(%)	0.27	—
7	Aggregate crushing Value(%)	22.6	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	22.4	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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Prepared by
Harshitha



FOR CIVIL Pro.
R. Karthik
R KARTHIK RECHAN
Authorized Signature
Quality Manager

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End of Report



TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2017-06-01-02 Date: 05-06-17

Customer : Assistant Executive Engineer, Yelahanka Sub-Division, BBMP, Bangalore.

Address : Yelahanka Sub-Division, BBMP, Bangalore.

Project Name : Contraction of drain at Down Bazaar road near Nagareshwara temple and Surrounding area in Ward No.1 of Yelahanka Sub Division.

Agency : Sri.Sambashiva Reddy.C, No.14, 6th C cross, 2nd main, Gopalappa extension, Marorayan Palya, Bangalore.

Customer's Reference : EE(YNK.D)E-PMT-09/W.O/56/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 01-06-17

Sample ID No : 2017-06-01-02/03

Sample Type : Fine aggregates

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption

Date of test : 01-06-2017 to 05-06-2017

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0	100	100	100	100	100
2	4.75 mm	39	39	3.9	96.1	90-100	90-100	90-100	95-100
3	2.36 mm	165	204	20.4	79.6	60-95	75-100	85-100	95-100
4	1.18 mm	228	432	43.2	56.8	30-70	55-90	75-100	90-100
5	600 micron	153	585	58.5	41.5	15-34	35-59	60-79	80-100
6	300 micron	229	814	81.4	18.6	5-20	8-30	12-40	15-50
7	150 micron	123	937	93.7	6.3	0-10	0-10	0-10	0-15
8	Pan	63	1000	100	0	---	---	---	---

Result : The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2017-06-01-02
Sample ID No : 2017-06-01-02/03

Date: 05-06-17

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	2.25	—
2	Specific Gravity	2.59	—
3	Material finer than 75 micron	5.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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Quality Manager

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****End of Report****



TEST REPORT OF PRECAST COVER SLAB

Lab ID : CP-2017-06-03-01 Date: 08-06-17

Customer : Assistant Executive Engineer, Yelahanka Sub-Division, BBMP, Bangalore.

Address : Yelahanka Sub-Division, BBMP, Bangalore.

Project Name : Contraction of drain at Down Bazaar road near Nagareshwara temple and Surrounding area in Ward No.1 of Yelahanka Sub-Division.

Agency : Sri.Sambashiva Reddy.C, No.14, 6th C cross, 2nd main, Gopalappa extension, Marorayan Palya, Bangalore.

Customer's Reference : EE(YNK.D)E-PMT-09/W.O/56/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 03-06-17

Sample ID No : 2017-06-03-01/03

Sample Type /Size : Precast Cover Slab

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete

Date of test : 03/06/2017

SL No.	Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
		(mm)	(mm)	(mm)	(Sq.mm)	(KN)	(N/mm ²)	(N/mm ²)	(N/mm ²)
1	Cover Slab-1	75.12	100.49	1.118	4431	95.8	21.6	20.1	25.1
2	Cover Slab-2	75.17	100.53	1.124	4437	99.3	22.4	20.8	26.0
3	Cover Slab-3	75.13	100.50	1.111	4432	96.6	21.8	20.3	25.3

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Quality Manager



TEST RESULTS OF STEEL

Lab ID : CP-2017-06-03-01 Date: 06-05-17
Customer : Assistant Executive Engineer, Yelahanka Sub-Division,
BBMP, Bangalore.
Address : Yelahanka Sub-Division, BBMP, Bangalore.
Project Name : Contraction of drain at Down Bazaar road near Nagareshwara temple
and Surrounding area in Ward No.1 of Yelahanka Sub-Division.
Agency : Sri.Sambashiva Reddy.C, No.14, 6th C cross, 2nd main, Gopalappa
extension, Marorayan Palya, Bangalore.
Customer's Reference : EE(YNK.D)E-PMT-09/W.O/56/2017-18
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 03-06-17
Sample ID No : 2017-06-03-01/01
Sample Type : Indus
Reference to BIS codes : IS 1786-2008
Date of test: : 05-06-17

SLNo	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample (kg/m)	Yield stress (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)
1	Indus	Fe500	10mm	0.615	547	623	20%

SLNo	Identification of sample	Grade of the sample	Diameter of the steel bar	Bend test	Rebend test
1	Indus	Fe500	10mm	Satisfactory	Satisfactory

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TEST RESULTS OF STEEL

Lab ID : CP-2017-06-03-01 Date: 06-05-17
Customer : Assistant Executive Engineer, Yelahanka Sub-Division, BBMP, Bangalore.
Address : Yelahanka Sub-Division, BBMP, Bangalore.
Project Name : Contraction of drain at Down Bazaar road near Nagareshwara temple and Surrounding area in Ward No.1 of Yelahanka Sub-Division.
Agency : Sri.Sambashiva Reddy.C, No.14, 6th C cross, 2nd main, Gopalappa extension, Marorayan Palya, Bangalore.
Customer's Reference : EE(YNK.D)E-PMT-09/W.O/56/2017-18
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 03-06-17
Sample ID No : 2017-06-03-01/02
Sample Type : INDUS TMT
Reference to BIS codes : IS 1786-2008
Date of test: : 05-06-17

SL.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample (kg/m)	Yield stress (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)
1	Indus	Fe500	12mm	0.885	553	648	19%

SL.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Bend test	Rebend test
1	Indus	Fe500	12mm	Satisfactory	Satisfactory

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Quality Manager



TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2017-06-12-01-01 Date: 15-06-17

Customer : Assistant Executive Engineer, Yelahanka Sub-Division, BBMP, Bangalore.

Address : Yelahanka Sub-Division, BBMP, Bangalore.

Project Name : Contraction of drain at Down Bazaar road near Nagareshwara temple and Surrounding area in Ward No.1 of Yelahanka Sub Division.

Agency : Sri.Sambashiva Reddy.C, No.14, 6th C cross, 2nd main, Gopalappa extension, Marorayan Palya, Bangalore.

Customer's Reference : EE(YNK.D)E-PMT-09/W.O/56/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 12-06-17

Sample ID No : 2017-06-12-01-01/01

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 14/06/2017

SL No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Concrete	M20	07/06/2017	14/06/2017	149.88 X 151.04 X 151.21	22638	8.196	393.9	17.4	17.9
2	Drain Concrete	M20	07/06/2017	14/06/2017	150.87 X 149.83 X 150.34	22605	8.147	413.7	18.3	
3	Drain Concrete	M20	07/06/2017	14/06/2017	150.62 X 150.28 X 151.31	22635	8.158	405.2	17.9	

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Quality Manager



TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2017-06-12-01-01 Date: 05-07-17

Customer : Assistant Executive Engineer, Yelahanka Sub-Division, BBMP, Bangalore.

Address : Yelahanka Sub-Division, BBMP, Bangalore.

Project Name : Contraction of drain at Down Bazaar road near Nagareshwara temple and Surrounding area in Ward No.1 of Yelahanka Sub Division.

Agency : Sri.Sambashiva Reddy.C, No.14, 6th C cross, 2nd main, Gopalappa extension, Marorayan Palya, Bangalore.

Customer's Reference : EE(YNK.D)E-PMT-09/W.O/56/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 12-06-17

Sample ID No : 2017-06-12-01-01/03

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 14/06/2017

SL No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Concrete	M20	07/06/2017	14/06/2017	149.35 X 148.73 X 149.49	22213	8.14	404.3	18.2	18.0
2	Drain Concrete	M20	07/06/2017	14/06/2017	150.23 X 151.27 X 149.84	22725	8.17	395.4	17.4	
3	Drain Concrete	M20	07/06/2017	14/06/2017	149.45 X 150.26 X 151.17	22456	8.26	415.4	18.5	

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